CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 89-032

NPDES PERMIT NO. CA0006335

WASTE DISCHARGE REQUIREMENTS FOR:

U.S. DEPARTMENT OF THE NAVY,
NAVAL SUPPLY CENTER OAKLAND,
POINT MOLATE SITE,
CONTRA COSTA COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region (hereinafter called the Board), finds that:

1. The United States Department of the Navy, Navy Public Works Center, San Francisco Bay (hereinafter called the Discharger) submitted an application dated October 14, 1988 for reissuance of waste discharge requirements and a permit to discharge waste under the National Pollutant Discharge Elimination System (NPDES), for the wastewater treatment facilities located at the Navy's Point Molate Site in Contra Costa County.

2. The Point Molate Site is the fuel depot of the Naval Supply Center, Oakland. The Point Molate wastewater treatment facilities are owned and operated by the Navy Public Works Center, San Francisco Bay.

3. The Discharger presently discharges an average of about 180,000 gallons per day (gpd) of treated domestic and industrial wastewater into San Francisco Bay, a water of the State and of the United States. The discharge is intermittent, with discharges to the Bay typically occurring from one to ten days per month. The domestic component consists of an annual average of about 8,000 gpd of secondary effluent from the domestic wastewater package treatment plant. The industrial component consists of an annual average of about 165,000 gpd wastewater from the Fuel Oil Recovery Plant, and an average of about 5,000 gpd of oily water and stormwater runoff. The domestic and industrial wastewater streams are combined for treatment by oxidation ponds and sand filtration prior to discharge. Treated effluent is discharged intermittently from the oxidation ponds through a deep water outfall located about 400 feet offshore from the intersection of Pond Road and Burma Road, north of the point of land known as Point Molate, at 37 deg., 57 min., 00 sec. North Latitude; and 122 deg. 25 min., 00 sec. West Longitude.

4. The domestic wastewater treatment plant includes a comminutor, an activated sludge/aeration tank, a recirculating biofilter, a clarifier basin, a final filter unit, and chlorination. Treated domestic effluent is pumped to the first of three aerated oxidation ponds, which are operated in series. The oxidation ponds also receive intermittent wastewater discharges from the two oil/water separators in the Fuel Oil Recovery Plant, oily water and stormwater runoff from the facility grounds, and backwash water from the final effluent sand filters. Final effluent from the ponds is treated by rapid sand filters, chlorination and dechlorination prior to discharge through the deep water outfall.

5. The Discharger is currently working on plans to upgrade the oxidation ponds and associated equipment in the near future. The planned improvements include raising and regrading the pond dikes; replacement of the existing sand filter backwash compressor with a new centrifical air compressor and installation of new air valves and controls; installation of a rotary air compressor for the pond aeration system; repair and upgrading of the air lines and aeration system components for all three ponds.

6. The discharge is presently governed by Waste Discharge Requirements prescribed in Order No. 84-02 adopted by the Board on January 18, 1984, which allow discharge into San Francisco Bay.

7. The Regional Board adopted a revised Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) on December 17, 1986. The Basin Plan contains a listing of beneficial uses and water quality objectives for surface waters in the region, including San Francisco Bay.

8. The beneficial uses of the Central Bay section of San Francsico Bay identified in the Basin Plan include:

   a. Industrial Supply
   b. Navigation
   c. Contact and Non-Contact Water Recreation
   d. Ocean Commercial and Sport Fishing
   e. Fish Spawning and Migration
   f. Wildlife Habitat
   g. Preservation of Rare and Endangered Species
   h. Shellfish Harvesting
   i. Estuarine Habitat

9. An Operation and Maintenance Manual is maintained by the Discharger for purposes of providing plant and regulatory personnel with a source of information describing all equipment, facilities, recommended operation strategies, process control monitoring, and maintenance activities. In order to remain a useful and relevant document, the manual should be kept updated to reflect significant changes in treatment facilities.

10. This Order serves as an NPDES Permit, adoption of which is exempt from the provisions of Chapter 3 (commencing with Section 21100) of Division 13 of the Public Resources Code (California Environmental Quality Act) pursuant to Section 13389 of the California Water Code.

11. The Discharger and interested agencies and persons have been notified of the Board's intent to reissue requirements for the existing discharge and have been provided an opportunity for a public hearing and the opportunity to submit their written views and recommendations.

12. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED, pursuant to the provisions of Division 7 of the California Water Code and regulations adopted thereunder, and to the provisions of the Clean Water Act and regulations and guidelines adopted thereunder, that the Discharger shall comply with the following:

A. Discharge Prohibitions

1. The bypass or overflow of untreated or partially treated wastewater to waters of the State, either at the treatment plant or from the collection system or pump stations tributary to the treatment plant is prohibited.

2. Discharge of wastewater at any point where it does not receive a minimum initial dilution of 10:1 is prohibited.

B. Effluent Limitations

1. Effluent discharged to the Bay shall not exceed the following limits:

Constituent	Units	Monthly Average	Weekly Average	Daily Maximum	Instantaneous Maximum
a. Biochemical Oxygen Demand	mg/l	30	45	60	--
b. Total Suspended Solids	mg/l	30	45	60	--
c. Oil and Grease	mg/l	10	--	15	--
d. Settleable Matter	ml/l-hr	0.1	--	--	0.2
e. Total Chlorine Residual (1)	mg/l	--	--	--	0.0

(1) Requirement defined as below the limit of detection in standard test methods.

2. The pH of the discharge shall not be greater than 9.0 nor be less than 6.0.

3. The moving median value for the Most Probable Number (MPN) of total coliform bacteria in any five consecutive samples of effluent discharged to the Bay shall not exceed 23 MPN/100ml. Any single sample shall not exceed 240 MPN/100 ml.

4. The domestic wastewater shall meet the following limit, prior to being combined with the industrial wastewater:

   The arithmetic mean of the biochemical oxygen demand (five-day, 20° C) and suspended solids values, by weight for effluent samples collected in a period of 30 consecutive calendar days shall not exceed 15 percent of the arithmetic mean of the respective values, by weight, for influent samples collected at approximately the same times during the same period (85 percent removal).

5. Representative samples of effluent discharged to the Bay shall not exceed the following limits in micrograms per liter (ug/l): (1)

Constituent	Daily Average(2)
a. Arsenic	200
b. Cadmium	30
c. Chromium(VI) (3)	110
d. Copper	200
e. Lead	56
f. Mercury	1
g. Nickel	71
h. Silver	23
i. Zinc	580
j. Cyanide	25
k. Phenols	500
l. PAHs (4)	150

(1) These limits are intended to be achieved through secondary treatment and pretreatment.

(2) Average of all flow-weighted samples collected over a 24-hour period.

(3) The Discharger may at its option meet this limit as total chromium.

(4) Polynuclear Aromatic Hydrocarbons (PAHs). This limit applies to the summation of the detected levels of the individual constituent PAHs as identified by EPA Method 610 (i.e. Total PAHs). If this limit is exceeded, the individual constituent concentrations shall be reported.

6. The survival of test fishes acceptable to the Board in 96-hour bioassays of the effluent shall be a 90 percentile value of not less than 50 percent survival, based on the ten most recent consecutive samples. Bioassays shall be conducted in accordance with Provision D.3. of this Order.

C. Receiving Water Limitations

1. The discharge of waste shall not cause the following conditions to exist in waters of the State at any place:

   a. Floating, suspended, or deposited macroscopic particulate matter or foam;

   b. Bottom deposits or aquatic growths;

   c. Alteration of temperature, turbidity, or apparent color beyond present natural background levels;

   d. Visible, floating, suspended, or deposited oil or other products of petroleum origin;

   e. Toxic or other deleterious substances to be present in concentrations or quantities which will cause deleterious effects on aquatic biota, wildlife, or waterfowl, or which render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentration.

2. The discharge of waste shall not cause the following limits to be exceeded in waters of the State at any place within one foot of the water surface:

   a. Dissolved Oxygen — 5.0 mg/l, minimum.

      The median dissolved oxygen concentration for any three consecutive months shall not be less than 80% of the dissolved oxygen content at saturation. When natural factors cause lesser concentrations than those specified above, then the discharge shall not cause further reduction in the ambient concentration of dissolved oxygen.

   b. Dissolved Sulfide — 0.1 mg/l, maximum.

   c. pH — Variation from normal ambient pH by more than 0.5 pH units.

   d. Un-ionized Ammonia — 0.025 mg/l as N, annual median; 0.16 mg/l as N, maximum.

   e. Nutrients — Waters shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.

3. The discharge shall not cause a violation of any applicable water quality standard for receiving waters adopted by the Board or the State Water Resources Control Board as required by the Clean Water Act and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Clean Water Act, or amendments thereto, the Board will revise and modify this Order in accordance with such more stringent standards.

D. Provisions

1. Requirements prescribed by this Order superscede the requirements prescribed by Order No. 84-02. Order No. 84-02 is hereby rescinded.

2. Where concentration limitations in mg/l or ug/l are contained in this Permit, the following Mass Emission Limitations shall also apply:

   (Mass Emission Limit in lbs/day) = (Concentration Limit in mg/l) x (8.34) x (Actual Flow in million gallons per day averaged over the time interval to which the limit applies).

3. Compliance with Effluent Limitation B.6. shall be determined using two test species in parallel, static renewal bioassays, using composite samples representative of the discharged effluent. Samples shall be composited from hourly samples taken for the duration of the discharge within a 24-hour period. One test specie shall be three-spine stickleback, and the other shall be either rainbow trout or fathead minnow.

4. The Discharger shall review and update its Operations and Maintenance Manual annually, or in the event of significant facility or process changes, shortly after such changes have occurred. Annual revisions, or letters stating that no changes are needed, shall be submitted to the Regional Board by April 15 of each year.

5. The Discharger shall review and update by December 31, annually, its contingency plan as required by Board Resolution No. 74-10. The discharge of pollutants in violation of this Order where the Discharger has failed to develop and/or implement a contingency plan will be basis for considering such discharge a willful and negligent violation of this Order pursuant to Section 13387 of the California Water Code.

6. The Discharger shall comply with all sections of this Order immediately upon adoption.

7. The Discharger shall comply with the Self-Monitoring Program as adopted by the Board and as may be amended by the Executive Officer.

8. The Discharger shall comply with all applicable items of the attached "Standard Provisions, Reporting Requirements and Definitions" dated December, 1986.

9. This Order expires March 15, 1994. The Discharger must file a Report of Waste Discharge in accordance with Title 23, Chapter 3, Subchapter 9 of the California Administrative Code not later than 180 days in advance of such expiration date as application for issuance of new waste discharge requirements.

10. This Order shall serve as a National Pollutant Discharge Elimination System Permit pursuant to Section 402 of the Clean Water Act or amendments thereto, and shall become effective 10 days after the date of its adoption provided the Regional Administrator, Environmental Protection Agency, has no objections. If the Regional Administrator objects to its issuance, the permit shall not become effective until such objection is withdrawn.

I, Steven R. Ritchie, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region on March 15, 1989.

STEVEN R. RITCHIE
Executive Officer

Attachments:

Standard Provisions and Reporting Requirements, December 1986
Self-Monitoring Program
Resolution No. 74-10
Order No. 84-60

[File No. 2119.1057]
[Originator/BDA]
[Reviewer/RJC]

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM

FOR

U. S. DEPARTMENT OF THE NAVY,

NAVAL SUPPLY CENTER OAKLAND,

POINT MOLATE SITE,

CONTRA COSTA COUNTY

NPDES PERMIT NO. CA0006335

ORDER NO. 89 - 032

CONSISTS OF

PART A, dated December 1986

AND

PART B

PART B

I. DESCRIPTION OF SAMPLING STATIONS

A. INFLUENT

Station	Description
A	At any point in the domestic waste treatment facilities headworks at which all waste tributary to the system is present and preceding any phase of treatment.

B. EFFLUENT

Station	Description
E-001	At any point in the outfall from the combined wastewater treatment facilities between the point of discharge and the point at which all waste tributary to that outfall is present. (Navy Code IS04).
E-001-D	At any point in the outfall at which point adequate contact with the disinfectant is assured (May be the same as E-001).
E-002	At any point in the discharge pipeline from the domestic wastewater treatment facilities at which point all waste tributary to that discharge is present, prior to combining with the industrial wastewater. (Navy Code SS04).

C. LAND OBSERVATIONS

Station	Description
P-1 through P-'n'	Points located at the corners and mid-points of the perimeter fenceline around the wastewater treatment facilities.

NOTE: A sketch showing the locations of these stations shall accompany each monthly report and the Annual report for each calendar year.

II. SCHEDULE OF SAMPLING, MEASUREMENTS, AND ANALYSIS

The schedule of sampling, measurements and analysis shall be that given as Table I (and Table I Footnotes).

III. MODIFICATIONS TO PART A

A. This monitoring program does not include the following sections of Part A: C.10., C.11., D.5., and G.4.e.

B. Paragraph C.5. of Part A is revised to read:

Average weekly and monthly values are calculated as the sum of all daily discharge values measured during the specified period (calendar week or calendar month), divided by the number of daily discharge values measured during that specified period.

IV. REPORTING REQUIREMENTS

A. Self-Monitoring Reports for each calendar month shall be submitted monthly, to be received no later than the 15th day of the following month. The required contents of these reports are specified in section G.4. of Part A.

B. An annual report covering the previous calendar year shall be submitted to the Regional Board by January 30 of each year. The required contents of the annual report are specified in section G.5. of Part A.

C. Any overflow, bypass or other significant non-compliance incident that may endanger health or the environment shall be reported according to sections G.1 and G.2. of Part A.

I, Steven R. Ritchie, Executive Officer, hereby certify that the foregoing Self-Monitoring Program:

1. Has been developed in accordance with the procedure set forth in the Regional Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in Regional Board Order No. 89-032.

2. Is effective on the date shown below.

3. May be reviewed at any time subsequent to the effective date upon written notice from the Executive Officer or request from the discharger and revisions will be ordered by the Executive Officer.

STEVEN R. RITCHIE
Executive Officer

Effective Date 3/15/89

Attachment: Table I with footnotes

TABLE 1

SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS (1)

Sampling Station		A	E-001 (2)			E-001-D (2)		E-002			All P Stas			
TYPE OF SAMPLE		C-24 (C-X)	Cont.	G	C-24 (C-X)	G	C-24 (C-X)	Cont.	G	C-24 (C-X)	O			
Flow Rate (mgd)			D					D						
BOD, 5-day, 20°C, or COD (mg/l & kg/day)		W			D					W				
Chlorine Residual & Dosage (mg/l & kg/day) (3)						2H or Cont.								
Settleable Matter (ml/l-hr. & cu. ft./day)				D										
Total Suspended Solids (mg/l & kg/day)		W			D					W				
Oil and Grease (4) (mg/l & kg/day)				D(4)										
Coliform (Total) (MPN/100 ml) per req't						D								
Fish Tox'y 96-hr. Percent Surv'l in undiluted waste							M(5)							
Ammonia Nitrogen (mg/l & kg/day)														
Nitrate Nitrogen (mg/l & kg/day)														
Nitrite Nitrogen (mg/l & kg/day)														
Total Organic Nitrogen (mg/l & kg/day)														
Total Phosphate (mg/l & kg/day)														
Turbidity (NTU or JTU)														
pH (units)				D			M(6)							
Dissolved Oxygen (mg/l and % Saturation)				D			M(6)							
Temperature (°C)				D			M(6)							
Apparent Color (Visual Observation)														
Secchi Disc (inches)														
Sulfides (if DO< 2.0 mg/l) Total & Dissolved (mg/l)				D										
Arsenic (mg/l & kg/day)					2/Y									
Cadmium (mg/l & kg/day)					2/Y									
Chromium, Total (mg/l & kg/day)					2/Y									
Copper (mg/l & kg/day)					2/Y									
Cyanide (mg/l & kg/day)					2/Y									
Silver (mg/l & kg/day)					2/Y									
Lead (mg/l & kg/day)					2/Y									

TABLE 1 (continued)
SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS (1)

Sampling Station		A	(2) E-001			(2) E-001-D		E-002			All P Stas.		
TYPE OF SAMPLE		C-24 (C-X)	Cont	G	C-24 (C-X)	G	C-24 (C-X)	Cont	G	C-24 (C-X)	O		
Mercury (mg/l & kg/day)					2/Y								
Nickel (mg/l & kg/day)					2/Y								
Selenium (mg/l & kg/day)					2/Y								
Zinc (mg/l & kg/day)					2/Y								
Phenolic Compounds (mg/l & kg/day)					2/Y								
Polynuclear Aromatic Hydrocarbons (7) (mg/l & kg/day)					2/Y								
All Applicable Standard Observations				D							M		
Unionized Ammonia (mg/l as N)													

LEGEND FOR TABLE

TYPES OF SAMPLES

G = grab sample
C-24 = composite sample - 24-hour
C-X = composite sample - X hours (used when discharge does not continue for 24-hour period)
Cont = continuous sampling
DI = depth-integrated sample
BS = bottom sediment sample
O = observation

TYPES OF STATIONS

I = intake and/or water supply stations
A = treatment facility influent stations
E = waste effluent stations
C = receiving water stations
P = treatment facilities perimeter stations
L = basin and/or pond levee stations
B = bottom sediment stations
G = groundwater stations

FREQUENCY OF SAMPLING

E = each occurence
H = once each hour
D = once each day
W = once each week
M = once each month
Y = once each year

2/H = twice per hour
2/W = 2 days per week
5/W = 5 days per week
2/M = 2 days per month
2/Y = once in March and once in September
Q = quarterly, once in March, June, Sept. and December

2H = every 2 hours
2D = every 2 days
2W = every 2 weeks
3M = every 3 months
Cont = continuous

TABLE I FOOTNOTES

(1) During any time when bypassing of any treatment process occurs, the monitoring program shall include the following sampling and analyses in addition to the above schedule for sampling, measurement and analyses:

a. When bypassing or upset of the Fuel Oil Recovery process occurs, which results in unusual discharges to the oxidation ponds: Daily grab samples of each affected pond for Dissolved Oxygen, pH and BOD (or COD).

b. When bypassing the chlorination process: daily grab samples for Total and Fecal Coliform analyses.

c. When bypassing the dechlorination process: hourly grab samples for chlorine residual analyses.

d. Continuous monitoring of flow.

(2) Indicated sampling is required only during the periods when effluent is being discharged to San Francisco Bay.

(3) Chlorine dosage shall be reported daily as total pounds (or kilograms) per day. Chlorine Residual concentrations shall be reported for samples prior to and following dechlorination.

(4) Each Oil and Grease sample shall consist of three grab samples taken at equal intervals during the sampling day, with each grab sample being collected in a glass container. The grab samples shall be mixed in proportion to the instantaneous flow rates occurring at the time of each sample, within an accuracy of $\pm$ 5 %. Each glass container used for sample collection shall be thoroughly rinsed with solvent rinsings as soon as possible after use, and the solvent rinsings shall be added to the composite sample for extraction and analysis.

(5) Bioassays shall be performed using two test species in parallel, static renewal tests using composited hourly samples representative of the discharged effluent. One test specie shall be three-spined stickleback, and the other shall be either rainbow trout or fathead minnow. Effluent for fish bioassays must be dechlorinated prior to testing.

(6) These parameters shall be tested for on the bioassay water, beginning at the start of the bioassay and then daily for the duration of the bioassay test (i.e. at 0, 24, 48, 72, and 96 hours from the start of the bioassay test).

(7) Polynuclear Aromatic Hydrocarbons (PAHs), as identified by EPA Method 610. If a discharge sample exceeds the effluent limitation for PAHs (Effluent Limitation B.5.1.), the concentrations of the individual constituent PAHs shall be reported.